

***Dermatobia hominis* infestation**

E. NUNZI
M.D.

F. RONGIOLETTI
M.D.

A. REBORA
M.D.

Department of Dermatology, University of Genoa, Genoa, Italy

Summary

A patient is reported who, after leaving Venezuela, developed some boils on the left upper limb inhabited by *Dermatobia hominis* larvae. The curious life-cycle of this tropical fly is described with some considerations about the diagnostic problem. A simple unreported way of larvae extraction is suggested.

KEY WORDS: erythromycin, granuloma.

Introduction

Infestation of the skin by the larvae of Diptera is an easily diagnosed disorder in Equatorial Africa or in Central and South America. In Europe it can be overlooked when it occurs as the result of a temporary residence in the infested areas. There are two main clinical features of cutaneous myiasis: the creeping eruption or linear myiasis and the furuncular form, with which the patient described here presented.

Case report

A 67-year-old woman left Venezuela in June 1982. Next month she presented complaining of boils on the left arm that she said had first appeared 1 month before. She also reported being bitten in the same limb by an unidentified mosquito during the last days she had spent in the Amazonian forest.

Examination revealed six different nodular lesions, 0.5-1.5 cm in diameter, which were violaceous and tender, infiltrated, and opened at the top with a pore about 1 mm in diameter (Fig. 1a). Close examination of the pore revealed that the cavity contained something which tended to surface at intervals (Fig. 1b).

After surgical enlargement of the pore, the pressure of the anaesthetic we syringed underneath expressed what appeared to be a legless larva (1

cm × 3 cm) (Fig. 1c). The larva was easily recognized as a third stage larva of *Dermatobia hominis* (Rook, 1979) (Fig. 1d).

Blood tests revealed an increase in ESR (40 mm/hr). Histopathology disclosed a foreign-body granuloma.

The patient was given erythromycin (1 g/daily) and recovered in a few days.

Discussion

Dermatobia hominis (L.Jr) is a fly that lays its eggs over other insects, particularly mosquitoes and zoophilous flies that bite man and other mammals such as cattle, monkeys, cats and pigs or even birds. The warmth of the body stimulates the larva to hatch, to fall onto the skin and penetrate through the mosquito bite. The development occurs in the subcutaneous tissue through three stages and takes 4 weeks to 3 months to complete. In the earliest stages, the larva looks like a drum-stick with a thinner posterior end that carries the spiracles, through which the larva breathes air by surfacing periodically. In the most advanced stage, the whitish black-dotted body of the larva is more uniform in diameter and typically bowed. Eventually, the mature larva comes out from the pore and falls to the ground where it completes its metamorphosis to pupa and adult fly (Rook, 1979; Hubler, Rudolph and Dougherty, 1974).

Diagnosis carries no problems once considered. In our case, the patient herself suggested the diagnosis by reporting a history of mosquito biting; in other cases (Everett, De Villez and Lewis, 1977) such a history may be lacking and only the observation of the larva surfacing to breathe air can help. The observation of the larva is made easier by filling the cavity with vaseline oil that forces the larva to surface for respiration.

The fly is confined to Central and South America

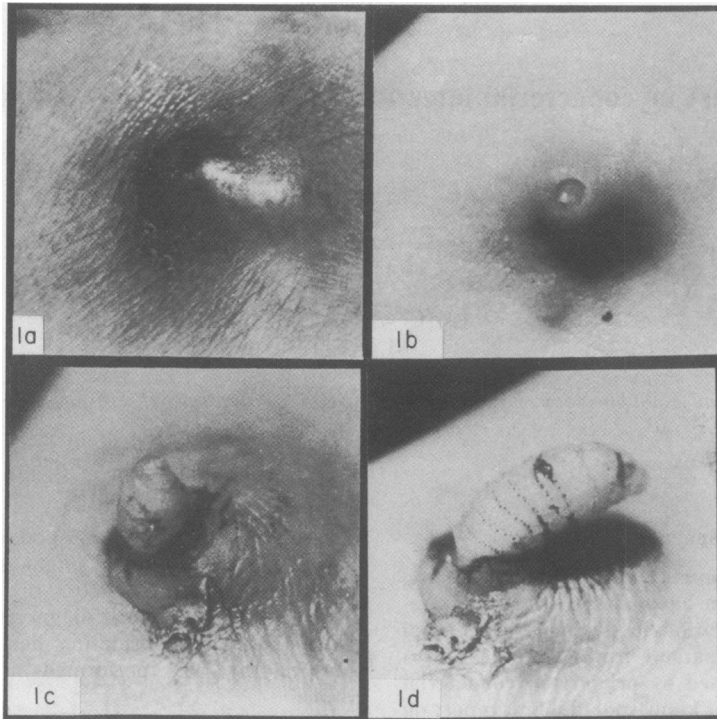


FIG. 1. (1a) A furuncular nodule. Note the pore at the top; (1b) the larva is surfacing to breathe air; (1c) the larva midway out; (1d) the third stage larva of *Dermatobia hominis*.

where the problems it causes are not uncommon. The observation of this disorder in Europe is uncommon. However, travel into tropical areas for job or leisure is increasing and such clinical occasions are likely to become more frequent in the future.

Acknowledgments

Thanks are due to Dr Marcella Guarrera who took the pictures and to Dr Roberto Poggi from the Museo Civico di Storia Naturale of Genoa who confirmed the recognition of the larva.

References

- EVERETT, E.D., DE VILLEZ, L.R. & LEWIS, C.W. (1977) Cutaneous myiasis due to *Dermatobia hominis*. *Archives of Dermatology*, **113**, 1122.
- HUBLER, W.K., RUDOLPH, A.H. & DOUGHERTY, E.F. (1974) Dermal myiasis. *Archives of Dermatology*, **110**, 109.
- ROOK, A. (1979) In: *Textbook of Dermatology* (Ed. by A. Rook, D. S. Wilkinson & F. J. G. Ebling), p. 918. Blackwell Scientific Publications, Oxford.

(Accepted 21 March 1983)